



# *the* *Comma*

No. 109 Spring 2021

Regional Magazine of West Midlands  
Butterfly Conservation

**Moth of the Year:**  
Cage-breeding Emperors

**Pheromone lures:**  
Recording more Clearwings

How *butterflies and moths* gave us joy in lockdown • [www.westmidlands-butterflies.org.uk](http://www.westmidlands-butterflies.org.uk)



# Chairman's Address



Michael Southall

## Cover story

A bevy of female Emperor moths bred by **Peter Hall** (see pages 8-9)

## Contributions

Please send articles and images to the Editor. Photographs should be as high-resolution as possible and sent as separate files (not embedded in a document).

Our copy deadlines are  
Spring - 28 February  
Autumn - 31 August  
Winter - 30 November  
(early submissions are welcome).  
Contact the Editor for more information.  
Editor: Marian Newell,  
[comma.editor@newellporter.co.uk](mailto:comma.editor@newellporter.co.uk)

## Publisher

Butterfly Conservation West Midlands Branch. The opinions expressed in this magazine are not necessarily those of the Branch or of Butterfly Conservation.

 BC West Midlands Butterflies and Moths

 Butterfly Conservation West Midlands

 @BC\_WestMids

 [westmidlandsbutterflyconservation.wordpress.com](http://westmidlandsbutterflyconservation.wordpress.com)

As I write this, towards the end of February, the first overwintering butterflies are being reported in the region. The first emergence of the spring *Orthosia* moths are also appearing, after what has been a cold start to the year. The frozen winter periods are said to help many species in their respective overwintering stage because that is what they have evolved to survive. Let us hope that proves to be the case this year.

### Branch activities

Obviously, this winter's work parties have been affected by lockdown and there will be much catching up to be done when they can resume. I was pleased to hear that some contractors had been able to coppice, particularly at Grafton Wood in Worcestershire and Haugh Woods in Herefordshire.

There are signs that we may also be allowed to emerge and mix later this spring with, hopefully, an end to restrictions by the summer solstice. A few summer events have been arranged with this in mind – see the Event Calendar for details.

Work is continuing on our online

moth atlas. Thanks to everyone involved in uploading all the information and photographs. It should be available soon and promises to be a fantastic interactive and updateable resource, which should encourage more moth recording in our region and complement our *Moths of the West Midlands* book.

Alongside, you'll find a summary of **Martin Warren's** appearance on Radio 4. It emphasises the vulnerability of small, isolated populations of butterflies and moths to extinction through extreme weather events. Such disasters can be alleviated by managing and connecting habitats to increase the abundance and distribution of threatened species. Projects have continued to investigate the feasibility of reintroducing the **Pearl-bordered Fritillary** to the

### Staff changes

We're sorry to report that **Charlotte Vincent's** three-year appointment with Butterfly Conservation ended in March. Charlotte helped land managers in the Wyre Forest area to implement changes, giving them advice and funding application assistance (see *Comma* 107 for more details). We're grateful to Charlotte for her many achievements and wish her every success for the future.



Company limited by guarantee, registered in England (2206468)

Registered office: Manor Yard, East Lulworth, Wareham, Dorset BH20 5QP.

Charity registered in England & Wales (254937) and in Scotland (SC039268)

Malverns and the **Kentish Glory** to the Wyre Forest, focusing at this early stage on habitat conditions.

### *Moth recorders' meeting*

Butterfly Conservation's UK Moth Recorders' Meeting, usually held in Birmingham, moved online this year. We were told a seven-year update on the state of Britain's larger moths is due out soon (now available at [butterfly-conservation.org/moths/the-state-of-britains-moths](http://butterfly-conservation.org/moths/the-state-of-britains-moths)). As scientific data accumulates over decades, long-term trends become more and more useful. It was interesting to hear how an American speaker was referring to UK lepidoptera data and applying it to his studies over the pond. You can watch the meeting on YouTube: [www.youtube.com/watch?v=8yRPZdVKs5g&feature=youtu.be](http://www.youtube.com/watch?v=8yRPZdVKs5g&feature=youtu.be)

As for the Branch, we look forward to meeting face-to-face again in better times. In the meantime, do join us online for our AGM on 8 May, with Martin Warren as guest speaker (see Event Calendar). Stay safe and enjoy the spring.

**Michael Southall** Branch Chair

## Is it true that the UK has lost half its butterfly populations since 1975?

More or less...

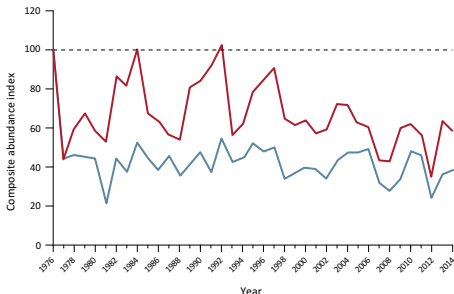
**Martin Warren** (former CEO of Butterfly Conservation, now Head of Development at Butterfly Conservation Europe) was interviewed on BBC Radio 4's *More or Less*, a weekly in-depth analysis of statistical outbursts by politicians and national organisations. A listener wanted to know if a tweet from the campaign group Extinction Rebellion was true; it said that the UK had lost half its butterfly populations since 1975. Martin's answer is, not surprisingly, well researched and not always obvious.

UKBMS records (index of abundancies) go back to 1975. Year on year, abundancies rise and fall by 20–30% due to weather and other conditions but long-term trends over half a century are clear – there's been a fall of about 50% since 1975, but the pattern of decline is not what you might expect. Specialists (species that live in particular parts of the countryside) have declined by 68% and generalists (wider countryside species) by 30%. Because roughly half of the UK's species are specialists and half are generalists, the average decline is 49%.

However, this decline can be traced to 1976, a very hot summer and an exceptionally dry year (I can remember the clouds of ladybirds biting my skin, perhaps seeking sweat). Specialists crashed by 72% in that one year, leading to local extinctions which did not recover on restricted habitats – a figure not dissimilar to the decline of 68% up to today. Generalists did eventually bounce back, recovering within three to four years, but they declined again, particularly in the 1990s and 2000s. If we look at the figures since 1976, the decline of specialists is not so dramatic. In other words, 1976 was a very poor year for specialists that have never recovered, while generalists declined more slowly in later decades. Perhaps more importantly, we are still unsure about the reasons – possibly climate change, pesticides and/or fertilisers?

**Mel Mason**, a loyal listener to *More or Less*.

You can hear the programme on BBC Sounds: *More or Less*, 03 February 2021, 'Teachers, Test & Trace and Butterflies' (the butterfly question starts about 22 minutes in): [www.bbc.co.uk/sounds/play/m000rvjr](http://www.bbc.co.uk/sounds/play/m000rvjr)



UK butterfly population indicators for habitat specialists (blue line) and wider countryside species (red line)

Taken from *The State of the UK's Butterflies 2015*





# Stepping Stones Rolling Over

Like so much else, the Stepping Stones project in South Shropshire has been disrupted by the Covid-19 pandemic

Three volunteer work parties improving habitat for the **Small Pearl-bordered Fritillary** and other butterflies, planned for this winter, had to be cancelled due to the lockdown restrictions. Rearranging them for the spring would not be possible, due to the need not to disturb ground-nesting birds. The project is funded by People's Postcode Lottery, and they have kindly allowed activities to continue until 31 December 2021. As a result, new dates for the three work parties will be scheduled for next autumn in due course. Two guided walks to see the Small

Pearl-bordered Fritillaries are planned:

- **Norbury Hill on Sunday 13 June, meeting at Norbury Village Hall car park at 2pm.** From there, we will car-share to gain access to the hill, part of which is being bought by the Middle Marches Community Land Trust, following a magnificent public fundraising effort last year.
- **Stiperstones National Nature Reserve on Wednesday 16 June, meeting at The Knolls car park at 2pm.** Numbers are limited and booking

The aim of the Stepping Stones project is to enhance wildlife in and around the Long Mynd and the Stiperstones, one of our priority landscapes for butterflies and moths. See *Comma 106*, page 14, for the background.

is essential for both walks. Areas where the butterflies can be seen are generally wet and uneven rush pasture, so appropriate footwear and clothing will be required. These walks are, of course, dependent on the Covid-19 restrictions then in force. Please contact me nearer the time for more details and to book a place if you're interested in coming.

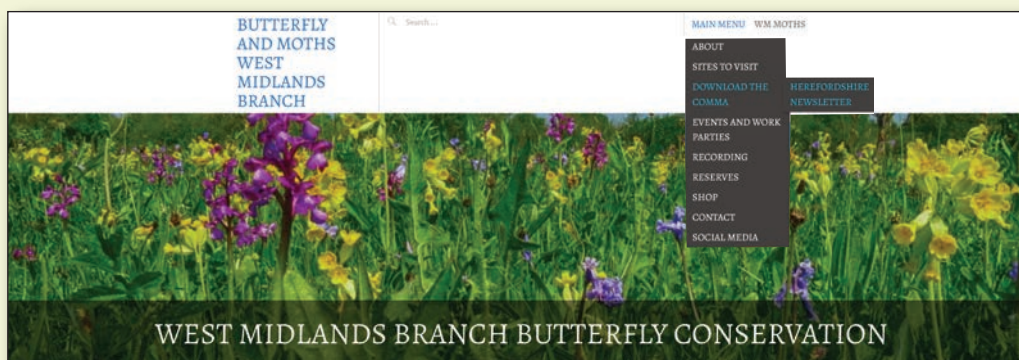
## Factsheet

We've been able to publish a revised management factsheet on Rush Pasture, the preferred habitat for the Small Pearl-bordered Fritillary in South Shropshire. Free copies are available: contact Stephen Lewis at [phwarden@sky.com](mailto:phwarden@sky.com) with your name and address, stating how many copies you'd like. Many thanks to Nick Williams, who worked with me on the factsheet, and we're most grateful to the players of People's Postcode Lottery for their generous support.



Article and photo by  
**Stephen Lewis**  
[phwarden@sky.com](mailto:phwarden@sky.com)  
07900 886809





# West Midlands Branch website

Having had problems with our existing website, we have now transferred all the data to a new website. This has been created using Wordpress, which is far more flexible and easier to use than the system we used before. To view the new website, visit:  
[westmidlandsbutterflyconservation.wordpress.com](http://westmidlandsbutterflyconservation.wordpress.com)

## Structure

The new website has accounts for all butterfly species, including an up-to-date atlas, population trends and phenology.

The main menu provides access to all our Branch activities, including sites to visit, publications to download, events to attend and recording schemes to participate in (see pages 22–23). There's a separate top-level menu for moths, taking you to the county moth reports and, once it's ready, the new moth atlas.

## Content

The website is for Branch members and we want it to reflect your interests and activities. We're looking for new articles and sites to include. We can link to blogs that are relevant to butterflies and moths. We also have a section ready for members' photographs of butterflies and moths.

I'm sure there must be loads of fresh content out there, so do send your words and pictures in. You can contact me on [john.tilt2@btopenworld.com](mailto:john.tilt2@btopenworld.com)

## Article by John Tilt

Note: Although the old website is still available at [westmidlands-butterflies.org.uk](http://westmidlands-butterflies.org.uk), and includes a link to the new website, it will not be updated in the future.


## KEY SPECIES



## TITTERSTONE CLEE HILL

533 Metres high part of an Area of Outstanding Natural Beauty. A Good place for some of our rarer butterflies





Pearl-bordered Fritillary  
in Haugh Woods

# Malvern Hills

The next step: breeding caterpillars from gravid females of Pearl-bordered Fritillary

Thanks to our volunteers, in just 12 months we have moved from wishful thinking to reality; the **Pearl-bordered Fritillary** is returning to the Malvern Hills. Land-owners have already started to improve the bracken habitats on our three receptor sites – Chase End Hill, Eastnor Obelisk and Swinyard Hill – although on-site reintroductions will not begin until spring 2022.

## Captive breeding

This year we're concentrating on setting up our captive larval breeding programme, starting with capturing up to five gravid females from each donor site. This has involved many visits, surveys, and reports, as well as negotiations with land-owners, wildlife organisations, Natural England and Butterfly Conservation. Even after consent forms have been signed, our plans are tempered by local population counts and habitat conditions.

During the past five months, 13 volunteers have been helping to grow hundreds of violet plants, which are essential to our breeding programme. Assuming spring population counts are satisfactory, we'll encourage our gravid females to lay eggs in 15 large pots containing violets and additional nectar plants to feed the females as they lay. Each can lay 100 eggs or more, but sometimes none. When caterpillars emerge, we'll move some into additional pots – 30 pots in total.

Each volunteer will take charge of two or more pots until spring 2022, keeping them out of direct sunlight, occasionally spraying with water to prevent desiccation and adding more violets to feed the growing caterpillars.

Next winter, the pots will be kept in a sheltered site with dried oak leaves added for hibernation. Frost and snow will be less problematic than winter warmth; it's essential that hibernating caterpillars do not emerge until the warm spring weather, when violets will be growing on receptor sites.


## Releasing and monitoring

Fourth or fifth instar larvae and adult butterflies will be released on at least two sites in spring 2022. More gravid females will be collected from donor sites, so that we can continue the captive larval breeding programme for several more years. Eventually, our three closely connected new sites will share an improved genetic mix from the different donor sites, improving survival chances for this newly established metapopulation.

Finally, we want to monitor the population dynamics on donor and receptor sites by studying genetic markers on selected individuals from each generation on each site. This involves removing a very small sample from an adult imago without harming it, and also from some of the larvae. Once this is done, identifiable (satellite) markers can be used to identify changes in different populations between sites over time. However, this is expensive and requires expert assistance. We hope to have more news about it very soon.

---

Article by **Mel Mason**, WMBC Vice Chair, and  
**Dr Ian Duncan** – Project Leaders



A specimen on bracken  
at Ewyas Harold



# Lost Fritillaries Project

Captive breeding in 2009-10 (photos by Nick Greatorex-Davies)



Ovipositing females - May 2009



Pots with larvae - July 2009



Overwintering pots - December 2009



Larvae basking after hibernation - March 2010



Fifth instar larvae basking - April 2010



This project depends on volunteer support and funding from the wider community.

We greatly appreciate all of the contributions received so far, and welcome any future donations on our JustGiving page at [www.justgiving.com/fundraising/mel-mason4](http://www.justgiving.com/fundraising/mel-mason4)



Cocoon with emergence tunnel



Larvae - fourth or final instar



Larva - fourth or final instar



Larvae - third instar

# Herefordshire



A very difficult decision, but I'd like to nominate the Emperor moth. Until last year, Herefordshire had just 36 records for this species going back to 1869 (17 of them from me and Aaron Woods), comprising 78 individuals. This number has now changed significantly

about the footpaths looking for a place to pupate and, if vigilant enough, spot the adults in spring flying over the moorland at speed. If you move away from heather, then bramble (*Rubus spp.*) becomes the preferred food-plant, although in captivity this species will happily take to quite an array of plants.

It's a moth that can be seen in daytime. The female is nocturnal and occasionally visits moth traps. The male is diurnal and flies strongly, looking at first glance like a **Small Tortoiseshell**, in flight. The un-mated female will spend the day on a branch or twig, hanging upside down releasing her pheromone to attract the day-flying males. But I get ahead of myself.

## Captive breeding

For many years, I have captive-bred Emperors and, in spring, I have the joys of watching them emerge from

The **Emperor moth** (*Saturnia pavonia*) is common enough in areas dominated by moorland, with heather (*Calluna vulgaris*), its preferred food-plant. Anyone visiting areas of Western Scotland is likely to come across the mature larvae in late summer wandering



# Moth of the Year 2020

their hard cocoon cases. There's an opening in the rigid cocoon where the hardened silk lines allow the newly hatched moth to squeeze itself out without damage, but the cocoon itself is extremely weatherproof and sturdy. It needs to be, as often the pupae over-winter twice (occasionally longer) before hatching, although most will emerge after one winter.

I keep the pupae in my garage, where it is cool and the inside temperatures mirror those outside, so that any hatchings correspond with wild emergences. Typically, temperatures of 16°C and above can trigger emergence in spring, with males hatching slightly earlier in the day than females. By early afternoon, any hatching is over for the day and I separate the males from the females to avoid in-breeding.

I then transfer the females into a large netted cage, (see cover photo), which I hang in an elder tree outside my study window. The females expand their wings and crawl up to the top of the cage, hang upside down and begin to emit their pheromones. And then it is a game of patience.

Usually, the period between 1.30pm and 6.30pm is when the males come calling, flying actively around the cage trying to locate the females. I have up to 30 females waiting for pairing at any time and I net an arriving male and introduce it into the cage. Pairing is almost instantaneous

and lasts a few hours.

Once a female has paired, egg masses soon follow. The small black larvae hatch after about three weeks, depending on the temperature. I feed them on damson (no prickles). As they grow, they change from black to orange-and-black and then green-and-black.

Excess larvae are returned to the wild, as are captive-bred males, released more than ten miles away. In 2020, I released over 2000 larvae so I hope that capturing males helps the species in the wild, as well as maintaining my captive population with a much lower mortality rate.

## *A remarkable year*

So what was the overall picture in Herefordshire last year? Very effective pheromone lures are available for this species – I remember a recorder in Ceredigion reporting male Emperors following her car as she left a site. Gail Hampshire and Jill Fountain used lures this year and recorded five males; combined with the 25 males that I recorded myself, this increased the database total by around 40%. So, in the 150 years to 2019, there were 36 records (78 individuals) and then, in 2020, 14 records and 30 individuals. Not bad! Perhaps something for you to consider trying in future years?

*Article and photos by Peter Hall*



## **Additional notes from Stourport-on-Severn**

As an experiment, I put out a lure in my garden on every suitable day from 9 to 26 April. During this period, I caught and marked 43 male Emperor moths. Most arrived after 4pm, often appearing as soon as I put out the lure, with some latecomers after 6pm. I carefully marked each specimen's wing with a different colour (green in the photo), so that I could see if it returned. This proved really interesting: only ten recaptures during the period, all but one having been marked the previous day. My highest total on one day was seven but others using lures in the area doubled this figure.

The experiment was reassuring in two ways. Firstly, it suggested a healthy local population of Emperor moths: the speed at which they arrived in my garden almost certainly meant local breeding. Secondly, the relatively low number of recaptures allayed concerns that using pheromone lures somehow affects the natural behaviour of the moths.

**Mike Williams**  
Publicity & Marketing



Hornet Moth - Lickhill, 25 June



Lunar Hornet - Kidderminster, 9 July

# A Search for Clearwings

Following Linda Magyar's excellent introduction to Clearwing moths, two of our members report on their findings from last summer. Both articles show just how much there is still to learn about the distribution and behaviour of this fascinating group of moths. We hope that more of our members might be encouraged to obtain a set of pheromone lures this summer and join us in this pioneering piece of citizen science.

The lures that I purchased were:

- API – Six-belted
- HOR – Hornet
- LUN – Lunar Hornet
- MYO – Red-belted
- TIP – Currant
- VES – Yellow-Legged and Orange-tailed

## *My allotment, Kidderminster*

Here, I lured four **Currant Clearwing** on 2 June and two **Red-belted** on 4 July. Currant requires mature currant bushes and Red-belted requires apple trees. Other species I successfully lured at the site were two **Yellow-legged** on 6 July and one **Lunar Hornet** on 11 July. The former requires oak and the latter willow/sallow.

During the summer of 2020, I decided that I would spend some time looking at Clearwing moths and their distribution locally, in and around the Wyre Forest District. I purchased a pheromone trap and a cross-section of lures for the most likely species within my target areas. Many of these areas held few or no previous records of Clearwings.

## *Hartlebury Common*

In 2019, I recorded the first Clearwing moth at this site when I discovered a female Yellow-legged resting on old oak tree stumps. Trying the lures, I recorded maximum counts of four Yellow-legged and eight Red-belted on 20 June and very surprisingly one **Orange-tailed** on 26 June. Orange-tailed favour



Six-belted Clearwing - Severn Valley, 29 July

wayfaring tree and guelder rose, the latter being present at the site.

### **Burlish Top Nature Reserve**

Here, I lured six Red-belted on 24 June and four Yellow-legged on 3 July. On 13 July, I added a single Lunar Hornet to the list. At the adjacent Burlish Meadows, I recorded yet another new species for the site: two **Six-belted Clearwings** on 6 July, using the lure in an area rich with their favoured plant, Bird's-foot Trefoil.



Red-belted Clearwing - Burlish Top, 24 June

### **Severn Valley Country Park**

Here, an incredible 12 Six-belted Clearwings were attracted to the lure in one of the Trefoil-rich meadows on 31 July. I also recorded two Yellow-legged there on 28 July.

### **Other areas**

On 25 June, I visited a site near Lickhill, Stourport, close to where **Hornet Moths** were discovered in 2019 by **Rob Williams**. On positioning the pheromone trap near to a stand of Poplars (their larval food source), I managed to attract one male Hornet moth.

Some areas that I visited proved less productive than I anticipated. At Blackgraves in the Wyre Forest on 20 July, only three Yellow-legged were attracted and, at Chaddeley Woods on 22 July, a single Yellow-legged was the only catch.

Other areas took me completely by surprise. While catching up with my mother-in-law at Moseley Bog in Birmingham on 19 July, I lured a Yellow-legged and, later that same afternoon, attracted a second one in her Kings Heath garden.

It just goes to show that Clearwing moths are far more widespread and well distributed than we'd ever imagined. There are still many sites out there with no Clearwing records just waiting to be monitored and I'll certainly be continuing my Clearwing observations this coming summer.

.....  
Article and photos by **Jason Kernohan**



Yellow-legged Clearwing - Burlish Top, 3 July





Lure in net in hedgerow

# Catching Clearwings!

## Seven days of surveying in Birmingham

Having been a moth enthusiast for some years, I thought I'd make the most of the great weather during lockdown/furlough last year to survey for Clearwing species in my Birmingham garden. Luckily, you don't need any special skills to find these under-recorded little moths, just the right equipment and some pheromone lures you can buy online. Then you just have to set them up, sit back and keep your fingers crossed for some surprises!

I decided to go all out and purchase three pheromone traps and a selection of lures from [www.angleps.com](http://www.angleps.com). I'd never attempted to trap Clearwings before so I was cautiously optimistic about attracting a couple of the more common species to my rather average Hall Green garden.

The lures that I purchased were:

- API – Six-belted
- CUL – Red-belted

- FOR – Red-tipped
- HOR – Hornet
- LUN – Lunar Hornet
- TIP – Currant and White-barred
- VES – Yellow-Legged and Orange-tailed

### 2 June

It was a warm and sunny late afternoon with a gentle breeze so I thought I'd give some of the lures a go and see if I got lucky. Before I could even open the grip-seal bag of TIP at 16:10, something started buzzing around my fingers. A **Currant Clearwing!** It must've already been in the garden! Encouraged, I set up the other traps using CUL and VES.

To my surprise, a **Red-belted** made a flying visit 13 minutes later but didn't stick around. Meanwhile, the Currants just kept appearing: a second at 16:40, a third at 17:14, six by 17:37, nine by 18:00 and a tenth by 19:00. I couldn't believe it! To top the day off, I found a beautiful fresh male **Yellow-legged** in the VES trap at 19:15. Who knew these little moths flew so late into the evening?

### 13 June

API, FOR and VES were the lures of choice today. Surprisingly, at 11:40, a rather confused **Orange-tailed** appeared at FOR. It seemed particularly interested too, until a big gust of wind blew it down the garden towards the correct lure. It stubbornly refused to enter the trap and instead preferred to zoom around outside and sunbathe on top. It finally went inside at 12:42 – a whole hour after first appearing. By 13:50, my first ever Red-tipped had flown into the FOR trap, with two more appearing between 14:50 and 15:40. I left the traps out until 19:10 but there was no further activity. The moths must've known that rain was imminent!

### 15 June

Another sunny day and more luring awaited with TIP, CUL and API. Red-belted were the stars of the show today! The first dived into the CUL trap at 10:31 (three minutes after deployment), six were inside by 11:00, eight by 11:13, four more by 12:00 and, by 12:45, a whopping 19 were in the trap! I did my happy dance around the garden at this point. I'm sure many more would've turned up if I'd left the trap out for a longer period, but it was hot, and the moths were extremely active. So off they went into the cool, dark garage for a rest before their photoshoot later.

Still no activity at API/TIP. Surprisingly, despite my previous success, no Currants had turned up at all! I was really after a **White-barred** so I left TIP out while I went for a walk. Upon returning, 18 Currants had appeared (14:30–18:00) but, sadly, no White-barred.

I later spent some time observing the Red-belted and their intriguing behaviour. Some made a beeline for some cat/fox poo in the flower borders and started feeding on it – just like Purple Emperors! One even stayed on the poo well into the evening. Another fed briefly on valerian and the rest stayed to clean themselves before flying away to find a roosting spot for the night.

### 24 June

Despite full sun and temperatures between 26–29°C, API and HOR failed to attract a single moth all day. A wasp almost gave me a heart attack though, when I found it in the HOR trap at 20:00, thinking it was the target moth! It was a still day so

perhaps a breeze was required to spread the pheromones further.

### 25 June

Conditions were warm and sunny with a strong breeze so surely something would turn up today! I deployed API and HOR at 09:30 and, by 11:45, a Six-belted had turned up. Their food-plant is Bird's-foot Trefoil, so I could only surmise it had come from the Cole Valley/Trittiford area (about half a mile away). It's amazing how far pheromones can travel on the wind and how good these moths are at following them to their source.

### 4 July

A dull, drizzly, cool (14°C) and breezy day arrived but I wasn't deterred! I'd heard stories about Lunar Hornets flying in all sorts of weather, so I set up LUN and HOR at 10:00. To my astonishment, an hour later, my first-ever **Lunar Hornet** appeared! I couldn't believe it! And what a beauty he was.

I left the trap out until 14:30 but no more appeared. The weather still hadn't improved so I decided to let him go and put everything away. Not one minute later, Luney zoomed back to the trap, made himself comfortable under the lid and promptly fell asleep. What a life these moths lead! He stayed there all afternoon and evening and didn't move a millimetre.

### 5 July

I was so desperate for a **Hornet Clearwing** by this point that I left the lure out all night but sadly, no Hornets went for a midnight flight! Yesterday's Lunar

CONTINUED ON PAGE 14 ►



Lunar Hornet Moth



Unpacking the shipment



Sorting the lures



Starting with the TIP lure

CONTINUED FROM PAGE 13 ►

was still clinging to the trap but began warming his wings at 07:30 before sleepily taking off with a lethargic buzzing sound, hopefully to find a mate. I set LUN and HOR up at 09:00 and, lo and behold, between 09:30 and 10:30, a different Lunar turned up! He was much more active than the previous one and, if I hadn't known better, I'd have fled up the garden thinking I was being chased by a giant hornet! Their mimicry really is remarkable.

By midday, it was mostly sunny, very windy and only 13°C. After a definite lull in activity, I was lucky to spot another Lunar dive-bombing the trap at 13:44. He didn't go inside but spent 15 minutes investigating the nearby clematis and surroundings, including my jumper which he seemed to take a definite liking to!

Article and photos by **Gill Thompson**

## Summary

Over my seven days surveying for Clearwings, I was astonished by what turned up. I expected maybe a couple of species and four or five individuals. Instead, I recorded seven species and 57 moths, with Currant and Red-belted by far the most abundant.

It was a thoroughly enjoyable experience and I'm delighted to have contributed to our growing knowledge of their behaviour and distribution. For anyone who hasn't tried recording these moths before, I highly recommend it! I can't wait to start surveying again this year. Hopefully, I will encounter my first Hornet, White-barred and Large Red-belted. You just never know what might turn up!

Pheromone traps and lures are available from Anglian Lepidopterist Supplies at [www.angleps.com](http://www.angleps.com)



Trap hung from clothesline



Trap fitted on stand



Trap with lure fitted in lid



Once again, we bring you details of events we hope to run but always check with the organiser before attending. Meanwhile, do join in with online groups and events, and perhaps have a go at our challenges.

## Branch AGM

**Branch AGM – online**

**Sat 8 May – 11am to 1pm**

Our guest speaker will be Martin Warren, talking about his new book (see page 28) and the latest research on butterflies. Email to register and receive a link for the Zoom meeting nearer the time. **Contact: Michael Southall** ([michael\\_southall58@hotmail.co.uk](mailto:michael_southall58@hotmail.co.uk) or 01299 251467)



Martin Warren (Chris van Swaay)

## Shropshire

### Clee Liberty Common Butterfly Survey

**Wed 9 Jun – 10.30am**

Meet at Heatham Gate entrance to the common (SO573849). Joint event with the Abdon Community Wildlife Group and part of our Common Cause, a project funded by the Heritage Lottery Fund involving 12 upland commons in four of England's national landscapes (the Long Mynd, Stiperstones and Clee Liberty in the Shropshire Hills).

**Contact Mike Williams**

([wmbutterflies@gmail.com](mailto:wmbutterflies@gmail.com) or 07802 274552)

### Prees Heath Silver-Studded Blue Guided Walk

**Sun 27 Jun – 2pm**

Hear about the heathland restoration project and how the former RAF control tower was conserved. Meet on the access track opposite the Steel Heath turning off the A49 (SJ557363). Wear appropriate clothing and footwear. Car parking is

limited, so please car-share if possible.

**Contact Stephen Lewis** ([phwarden@sky.com](mailto:phwarden@sky.com) or 07900 886809)

### Prees Heath Work Parties

**Wed 23 Jun, 15 Sep, 13 Oct, 17 Nov, 15 Dec – 10.30am**

Meet on the access track opposite the Steel Heath turning off the A49 (SJ557363). Wear appropriate clothing and footwear. Bring something to eat and drink. Children must be accompanied by an adult. **Contact Stephen Lewis** ([phwarden@sky.com](mailto:phwarden@sky.com) or 07900 886809)

### Personal Guided Tours

**Comer Woods 26 or 27 Jun\*  
Bridgnorth Cemetery and Hermitage  
3 or 4 Jul\***

\* Date to be determined by weather forecast  
Email to arrange a tour (both locations are in *Walking with Butterflies*). Each tour will include only the guide and people in a single bubble.

**Roger Littleover** ([rogerlittleover@hotmail.com](mailto:rogerlittleover@hotmail.com))

## Worcestershire

### **Moth ID course with Dave Grundy, Wyre Forest area**

**Sat 3 Jul – 10am to 4pm**

An introduction to the moths of the Wyre Forest, ideal for beginners and those wanting to improve their skills (venue to be confirmed). Booking required – £15 payment by cheque in advance (refundable if event cannot run). Bring a packed lunch. **Contact: Mike Williams** ([wmbutterflies@gmail.com](mailto:wmbutterflies@gmail.com) or 07802 274552)

### **Guided Walks, Monkwood**

**Sun 18 Jul, 11am, 12pm, 1pm, 2pm**

In search of **White Admiral** and **Silver-washed Fritillary**, celebrating the launch of the Big Butterfly Count – please book in advance, stating which walk you wish to join.

**Contact: Mike Williams** [wmbutterflies@gmail.com](mailto:wmbutterflies@gmail.com) or 07802 274552)



Silver-washed Fritillary (Mel Mason)

### **National Moth Night**

**Sat 10 Jul – 10am**

Our Chairman will be showing moths found the previous night in his garden and surrounding countryside. The meeting may be in the garden or online: email to register and receive details nearer the time. This is one of three National Moth Nights: [www.mothnight.info](http://www.mothnight.info)

**Contact: Michael Southall**

([michael\\_southall58@hotmail.co.uk](mailto:michael_southall58@hotmail.co.uk))

### **Brown Hairstreak Week, Grafton Wood**

**Mon 23 Aug to Sun 29 Aug, from 2pm**

Meet at the main reserve gate. Guides will be available to help to find this elusive species. Check the weather forecast before coming and also look for updates on sightings and locations at [graftonwood.wordpress.com](http://graftonwood.wordpress.com).

**Contact: John Tilt** (01386 792 458)

## Herefordshire

### **Ewyas Harold Common Work Parties**

**Sat 10 Apr, 24 Apr – 10am**

Meet at the northern Cwm Hill end of Ewyas Harold Common, adjacent to the top cattle grid (SO382302). Approach from Abbey Dore off the B4347 (SO384306). Bring gloves, hand tools, lunch and a drink.

**Contact: Ian Hart** ([yellowrattle4@aol.com](mailto:yellowrattle4@aol.com))

### **Haugh Wood Guided Walk**

**Sat 17 Jul – 2pm**

A walk of about two hours following the green trail. Children are welcome but must be accompanied by an adult. No dogs please. Meet at Forestry England car park off the minor road from Mordiford to Woolhope (SO593365).

**Contact: Bob Hall** (01432 850623 or [randphall@gmail.com](mailto:randphall@gmail.com))

## Beyond our region

### **Marsh Fritillary Hunt, South Wales**

**Sat or Sun, 5 or 6 Jun**

An out of area trip with BC South Wales branch to see Marsh Fritillary, a species that no longer occurs in the West Midlands. Choice of day dependent on weather forecast. **To book a place and receive meeting details, contact Mike Williams** ([wmbutterflies@gmail.com](mailto:wmbutterflies@gmail.com) or 01299 824860).

### **Big Butterfly Count**

**17 Jul to 9 Aug**

Add your sightings to this national snapshot. See [bigbutterflycount.butterfly-conservation.org](http://bigbutterflycount.butterfly-conservation.org)

### **Don't forget to check Butterfly Conservation's websites and groups for other events:**

- [westmidlandsbutterflyconservation.wordpress.com/events-and-work-parties](http://westmidlandsbutterflyconservation.wordpress.com/events-and-work-parties)
- [www.facebook.com/groups/westmidlandsbutterflyconservation](http://www.facebook.com/groups/westmidlandsbutterflyconservation)
- [www.facebook.com/groups/250738579030862](http://www.facebook.com/groups/250738579030862) (Malvern Butterfly Group)
- [butterfly-conservation.org/events](http://butterfly-conservation.org/events)

**IMPORTANT: Always contact the organiser before attending an event.**



## Fundraiser: 1000-species challenge

**Chris Millward** aims to record 1,000 plant and animal species on 300 acres of wildlife-friendly farmland by 31

December 2021. His goal is to document the community of life on farmland, from bacteria in the soil up to the humans who live, work and walk there. The results will be used as a tool to help communities better understand and appreciate how deeply connected we all are to the rest of life on earth.

Chris says, *'Butterflies are important indicators of the health of our environment. I'll be using this project to show how we're all connected to them, as well as to the soil beneath our feet.'* He hopes to raise funds for Butterfly Conservation: see [www.gofundme.com/f/butterfly-consciousness](http://www.gofundme.com/f/butterfly-consciousness)



Note: The Branch hopes to welcome BC Trustee Simon Saville to the region on his Land's End to John O'Groats bike ride, cancelled owing to Covid and now rescheduled (see *Comma* 106 for the plan and our social media pages for updates).

## Birmingham and Black Country

### Looking back through scarlet-tinted glasses

Stourbridge Scarlet Tigers enjoyed a successful year in 2020. The first caterpillar appeared on 10 March and numbers increased steadily. Unsurprisingly, the adult moths also appeared earlier than usual and, despite this, the flight season carried on into July as normal. Reports of Scarlet Tigers appearing all over the region indicate that they are thriving, a success we should celebrate.

Here their preferred caterpillar food-plant is Alkanet, a love-it/hate-it invader. The recent cold spell seemed to affect the plant badly but within a day of milder weather, it had sprung back to life.

The project along Roman Road is not just about Scarlet Tiger moths. The aim is to enhance the bridle path for the benefit of all wildlife. Unfortunately work parties have been badly disrupted but I must thank our volunteers who turn up at the drop of a hat.

In April we had the chance to record the spring flora

and fauna as part of an international City Nature Challenge aimed at engaging the public and raising awareness of the wildlife on our urban doorsteps. Our city encompassed Birmingham and the Black Country – you can see how we contributed to the totals at [citynaturechallenge.org/collective-results-2020](http://citynaturechallenge.org/collective-results-2020)

Overall 2020 was good for our butterflies, with numbers of Peacock and Small Tortoiseshell caterpillars at record levels. Several of our more common butterflies go largely unnoticed. The first Speckled Wood is always a welcome sight and constant companion along Roman Road. By mid-June, the appearance of Ringlets dancing among the grasses is a sure sign that summer has arrived.



Mating pair of Ringlets  
(Joy Stevens)

So, what will 2021 bring? The first Tiger caterpillars have already been seen!

Joy Stevens [joystevens@blueyonder.co.uk](mailto:joystevens@blueyonder.co.uk)



### Good Verge Guide

Plantlife has published a go-to guide for transforming local verges into wildlife havens. It's called the *Good Verge Guide* and you can download it free from [www.plantlife.org.uk/application/files/7916/1191/6240/Road\\_verge\\_guide\\_2021\\_WEB.pdf](http://www.plantlife.org.uk/application/files/7916/1191/6240/Road_verge_guide_2021_WEB.pdf)



## Challenge: Butterfly Walks

With continued Covid restrictions at least to the end of June, we haven't been able to feature as many early summer events as we'd like. As an alternative, we thought we'd lay down a Butterfly Walks Challenge to members.

Our *Walking with Butterflies* guide describes 40 fantastic walks featuring butterflies, and in some cases day-flying moths, across our region. There are four walks in Birmingham and the Black Country, six in Herefordshire and Staffordshire, nine in Worcestershire and 15 in Shropshire (including Venus Pool, featured later in this issue) so, wherever you live, there's plenty of choice. Doing all 40 walks might be a tad ambitious in a single season but you could try all the walks in a county or use the guide to select particular species you'd like to see. Below are some suggestions for enjoyable and accessible walks that'll give you a good chance of seeing some of our rarer species on the wing over the next few months. Don't forget to log all your sightings on iRecord and share them on social media too.

For **Green Hairstreak** (Apr–Jun): Clent Hills, Saltwells, Catherton Common, Granville NR, Long Mynd, Salthouses, Stiperstones, Hartwell Hills, Milldale, The Roaches, Hartlebury Common

For **Dingy Skipper** (May–Jun): Granville NR, Llynclys Common, Salthouses, Milldale, Silverdale, Knapp and Papermill

For **Grizzled Skipper** (Apr–May): Llynclys Common, Throckmorton



For **Emperor Moth** (Apr): Hartlebury Common, Stiperstones

For **Scarlet Tiger moth** (mid-Jun): Roman Road

For **Wood White** (May–Jul): Queenswood, Woolhope Dome, Blakeridge Wood

For **Pearl-bordered Fritillary** (May–Jun): Llynclys Common, Wyre Forest

For **Wall** (May–Jun): Blakeridge Wood, Earl's and Pontesford Hill, Milldale

*Walking with Butterflies* is available from WMBC, 2 Dewberry Close, Stourport-on-Severn, DY13 8TB. Please enclose a cheque for £7.45, made out to Butterfly Conservation (West Midlands branch), or contact Mike Williams at [wmbutterflies@gmail.com](mailto:wmbutterflies@gmail.com) if you prefer to pay by bank transfer. *Butterflies of the West Midlands* contains a further 25 walks and is available for £18.95 from [www.naturebureau.co.uk/bookshop](http://www.naturebureau.co.uk/bookshop)

## Staffordshire

### Dorothy Clive Garden Open Garden

Sun 11 Jul – 10am to 4pm

Moth morning with grand opening of moth traps from 10.30am. Guided butterfly walks during the day, plus the Branch's information stall. Directions

on [dorothyclivegarden.co.uk](http://dorothyclivegarden.co.uk)

Contact Mike Williams ([wmbutterflies@gmail.com](mailto:wmbutterflies@gmail.com) or 07802 274552)

### Kinver Edge Moth Morning

10 am, date and location to be confirmed

Contact Mike Williams ([wmbutterflies@gmail.com](mailto:wmbutterflies@gmail.com) or 07802 274552)

See page 26 for our 40-species challenge

# Inspired by their sightings

In our last issue, we shared artworks created by members of the Branch's Facebook group. This time we're bringing you poems that group members have written to express their experience of butterflies and moths. Enjoy!

## **Skipper** Andrew Fusek Peters

*So small, this tiny shock of sun-fall flies  
flowers are by your good grace attended  
Far from western distant different skies  
Nymphs with iridescent rays descended*

*Were this the dusk, if this meadow ended  
All my days, I would be so happy yes!  
To kneel among the skippers with bended  
Prayer, the evening star my sweet success.*



*Skipper is in the family Hesperidae  
Hesperides – daughters of Hesperus, the god of the  
Evening Star, Venus. They are nymphs who tend a  
blissful garden far to the West*

## **Butterfly Year** Craig Jones

*The year's first sun-washed day that brings  
The welcome Brimstone's Sulphur wings.  
Then Orange-tip and Hairstreak Green  
Announce the Spring at last is seen.*

*On Summer's Bank, in Lea and wood  
Companions of my childhood.  
They flutter, jink and tumble down  
On powdered wings of blue and brown.*

*Now Summer Fades, Autumn calls, and Winter lies ahead.  
The Peacock and the Tortoiseshell slumber in the shed.  
Keepers keep the gates no more, the Ringlets have all gone.  
But still an Admiral Red is seen braving Winter's sun.*

## **The Butterfly Ball** Roger Littleover

*Flitting and flirting  
Twisting and twirling  
Tumbling and soaring  
Creation applauding  
As shadow and Light  
Join in with the flight  
I watch for a while  
As they begin to spiral  
Then chancing to settle  
On bramble or nettle  
A moment in time  
Captured in rhyme.  
Caught up in the trance  
Of the butterfly dance.*

*Inspired by mating Speckled Woods*

Photographs courtesy of the poets whose work they accompany.  
Thanks to Andrew Fusek Peters for the background image of Small  
Tortoiseshell wings.

CONTINUED ON PAGE 16 ▶

## One Last Butterfly

Julia Saunders

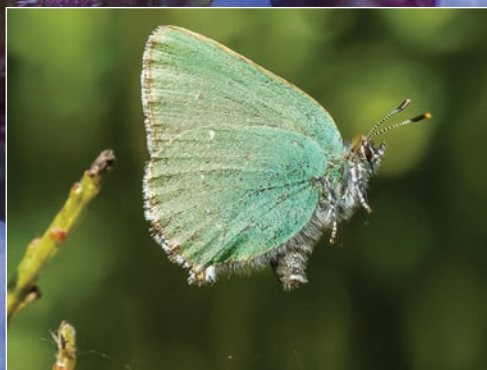
*Walking through a late September Beech wood.  
Relishing its sensory overload and  
Hoping.  
Hoping for one last butterfly.*

*Diagonal shafts of low sun spotlighting the treasures on the burnished floor...  
Destroying Angels, Death Caps and Sickeners.  
Their warning names belying their beauty.*

*Wide eyes darting and heart quickening with every flash of airborne copper.  
Falling leaf disappointment gentled by a game of blackberry roulette.  
This one – shining, purple-black and bursting with earthy sweetness  
This one – all but identical and just as tempting but winkingly sharp.  
Still I continue to gamble with them.*

*Another downward leaf at the edge of my vision.  
But this one not falling  
Not drifting  
But flying, gliding, settling with wings of marmalade velvet open to the late warmth.  
There it is, the final butterfly of my year.*

*But not a full stop.  
A Comma  
Until next year's first.*



## Green Hairstreak

Andrew Fusek Peters

*This car park where there is no shade  
And lazy litter's lobbed and laid  
By those whose lack of care's displayed;  
yet if their thoughtless eyes had strayed  
Looked close, their souls I swear be swayed  
By vibrant perching accolade,  
Annihilating all that's made  
To a green thought in a green shade.*



## The Butterfly Effect

Melvyn Lambert

Butterfly wings of grace  
Flap don't you, beat won't you,  
Fanned,  
air curls, swirls,  
forming  
the little vortices,  
all joining then,  
a billion like, wing sent eddies.  
Forward, forward vortex growing,  
Racing fast the atmospheres,  
Spirals huge, vast hurricane  
Central eye, fixed, downward  
staring.  
Thousand thunders mighty crash.  
Air roaring, howling, blasted  
sends,  
clouds blackened, bursting,  
deluge deeply.  
Devastation,  
the ruined land.  
Butterfly wings of grace,  
Flap don't you, beat won't you.

## The Comma – *Polygonia c-album*

Roger Littleover

Cryptic colours and jagged edges  
Hibernating through cold winter nights  
Hidden in log piles or privet hedges  
Waiting for springtime sun to rise.  
A flash of gold he comes to settle,  
Scalloped wings quickly close,  
Silhouetted stance on stinging nettle  
*Polygonia* – perfectly posed.



## The Damaged Ones Julia Saunders


Yet still, with wings torn and faded and scale sparse, they fly.  
That's all they know, all they have known  
And they will fly until they cannot.

Until they are just flashes of scarlet and azure and burnt umber  
In a memory on a day of slate skies and of hats pulled down over cold ears.  
Until they are a just thought smiled behind half closed eyes.

They don't know that others see the colours and not the damage.







Where to begin? Of course it must be at the beginning. Serendipity and a butterfly were responsible for introducing a whole new world to me on a hot summer's day back in July 2018. A day that set me upon a path of discovery, and one that opened my eyes, visually and aesthetically, to an appreciation of butterflies' beauty, form and colour. A magic spell was cast.

# Clouded Yellow Butterflies,

Late morning of 17 July saw me at Venus Pool Meadow, armed with my trusty old Nikon and nursing a dodgy back. On this day of the week, I would normally be involved in work party tasks high up in the Shropshire Hills with the Wildlife Trust, but moving a weighty wardrobe the evening before had proved to be a lift too far. So no heavy work for now, yet I had to do something outdoors on such a sunny day. I know, I'll nip out to Venus and photograph some of the **Common Blues** that I've seen there in the past.

Venus Pool Nature Reserve is a wonderful large open meadow arena. Many associated butterfly and insect species are found within its sun-trapped borders. Lucerne, an introduced perennial, grows there in purple profusion, attracting good numbers of insects; indeed, without doubt, this plant drew in and captured our **Clouded Yellows**.

As I walked onto the meadow, a shimmering heat lay heavy over the sun-drenched expanse and a variety of mating butterflies were dancing above in the hot arid air. I began snapping pictures of the Common Blues and several

other winged beauties, including a **Brimstone**. It all felt so dreamy, as bees buzzed, grasshoppers chirruped, and butterflies charmed underneath the heady sun, and I reflected.

Suddenly I'm woken: a rocket streak of yellow shot by, heading away forming a butter blur. Another Brimstone – but flying so quickly, I wondered? Clutching my camera, I dashed to the area where it had dropped onto the meadow. Getting nearer now, and walking ever so slowly, I could see it clearly on the Lucerne, feeding. 'Blimey, that's a Clouded Yellow!' I thought, raising the camera, amazing myself with my oh-so-sure identification, having never spotted one before. The observant butterfly wanted none of this; noticing me quaking nearby with excitement, it promptly disappeared from sight. Bah, and no photograph!

Not long afterwards, a fellow butterfly-spotter ambled by. I told him what I'd seen but, with a double shake of his head, pronounced, 'No-no, not here. I think you've





Photo and watercolour of sighting

# Venus Pool, and me

seen a Brimstone, Clouded Yellow are Southern England.' With that, he took his leave saying he'd been on the reserve for over two hours and her indoors was getting his lunch ready. Some minutes later, that pesky butterfly zoomed by me again, quickly turned and flew back, landing nearby... O Fortuna!

A painfully slow raising of camera to eye, click click, and some images were in the bag. For five minutes it settled nearby, and, observing closely, I realised this gorgeous orange-yellow butterfly was different. It seemed almost to have an attitude in the way that it sat and looked back with those marvellous green eyes, as if to say, well here I am! And then it flew away.

My field pocket guide confirmed my sighting. Later I contacted Mike Williams, who kindly reported and publicised. Throughout July and August Clouded Yellow were a big attraction, many people travelling many miles to view them. A chase was necessary with most sightings – all great fun but bring your trainers.

It was estimated up to a dozen individuals may have shown overall, males making up the larger sex group. They stayed until 31 August. My luck held, from my spotting the first to my seeing the last, a wing-tattered individual. Pleasing to me was that others came and shared the experience of observing the species for the very first time. Hopes were high of breeding, but sadly nothing was observed.

The yellow one had been so unusual to see in Shropshire, making me feel that my experience was special. Spurred on now, I wanted to get to know and understand butterflies of all species. Clouded Yellow day had set me onto a sort of clouded yellow brick road, seeking out other butterfly species and transporting me to some glorious locations. Most satisfying was making some great Aurelian friends with whom to walk and encounter the magic of butterflies' charms.

Article and images by Melvyn Lambert



Purple Hairstreak  
underwing  
(Mel Mason)



Purple Hairstreak caterpillar (Patri)

# The Purple Hairstreak: choice or necessity?

Months of careful observations advance  
our knowledge of habitat preferences



Purple Hairstreak pupa (Peter Eeles)

Lockdown forced me to seek alternative venues for spring recording in 2020. I targeted areas in North Staffordshire within a 30-minute walk from my home. Landowner consent obtained, I selected a long bank of mature oaks sheltering a mass of hawthorn/blackthorn scrub; this contained many self-seeded oak saplings.

## Spring

On my first visit, I quickly located two **Purple Hairstreak** ova (eggs) on a mature oak. Ova are small and resemble a squashed golf ball with a dimple (micropile) in the centre of the upper surface. Pure white when laid, they can appear pale blue when wet and swiftly discolour to pale grey. The larvae emerge through the micropile from early April.

## Summer

Between 6 July and 14 August, I witnessed 32 ova

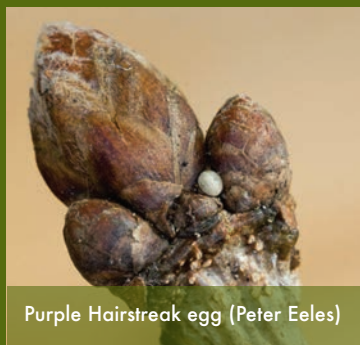
being laid on 22 separate oak saplings. Over 18 visits between 10am and 7.30pm, I never saw a Hairstreak on the mature oaks. Most visits were between 11am and 1pm; I saw egg-laying outside these times twice. Four consecutive nights of hard frost in April had killed most new growth on the oak saplings. Only more mature growth survived, producing large buds.

July and August were blighted by persistent strong winds but the bank remained sheltered. On 8 July in gusty conditions, within 25 minutes I'd seen 14 Purple Hairstreaks weaving in and out of the scrub. Each disappeared into the foliage of an oak sapling.

Having landed on a leaf, they walked down onto the branch below and searched the side branches containing clusters of newly formed buds. After selecting a specific bud (invariably the fattest but not always the most prominent), each would stand antennae waving, position her abdomen towards the



ck Clement)



Purple Hairstreak egg (Peter Eeles)



Purple Hairstreak male (Mark Searle)



Purple Hairstreak female (Bob Eade)

### Winter

Further visits in November 2020, after the oak leaves had fallen, disclosed 267 ova on 26 saplings, with a maximum of 27 ova on a single sapling. A further 28 ova whose position I had logged had disappeared (most likely predated, probably by tiny *Trichogramma* wasps).

Why were saplings used when healthy mature south-facing oaks were available? Female Purples are delicate creatures: was it the strong winds or frost damage that caused this behaviour?

Buds on the saplings were visibly larger than on the mature oaks only 1.5 metres away. Large buds in a sheltered warm climate open earlier and provide more food for larvae.

I've now learned that, over winter, it is planned to house a large flock of sheep on the land including the bank, where so many ova presently exist. One wonders by spring how many ova will have been 'predated' by browsing sheep.

Article by **Charles Whitaker**

base of the bud and deposit an egg, taking at most five seconds. She often laid a second egg in close proximity before either flying off or, more often, climbing back into the sunshine to bask/rest. The whole process would then be repeated.

Shaded saplings were never visited, nor were the tallest bud-bearing branches selected. All ova found were laid on the south or south-westerly side of saplings that were three to eight feet in height, at mid-height and towards the centre of groups of saplings. The density was greatest about two feet above surrounding scrub, this being the lowest that sunlight could penetrate to the centre of the groups.

Why were saplings used when healthy mature south-facing oaks were available?

# Nearly 70,000

Small White  
(Andrew Fusek Peters)

Last year, we had the highest number of butterfly records we've ever seen – just under 70,000 records from 4011 recorders. This may have been as a result of the Covid-19 lockdown.

There are four main recording systems: UK Butterfly Monitoring Scheme; the Big Butterfly Count; the Garden Butterfly Survey; and casual Recording on iRecord. We analyse records by the West Midlands' traditional biological vice-counties: Hereford, Worcester, Shropshire and Staffordshire.

## Most recorded species

The most recorded butterflies in 2020 were **Small** and **Large White**, **Peacock** and **Meadow Brown**. However, this does not mean that these are the commonest species: we need to look to the UKBMS analysis for population trends. To enable an atlas to be produced, we need to analyse the species in 10 km squares. The atlas produced covers the last five years and we have a good coverage of all the squares in the West Midlands.

## Most recorded squares

The most recorded square was SO74 (which includes the Malvern Hills), with almost 6000 records. In contrast, two poorly covered squares are SO69

(around Morville in Shropshire), with 67 records and only 15 species, and SJ81 (around Wheaton Aston in Staffordshire), with 126 records and 16 species.

## Other findings

So, what do we get from all this data? For each of our Biodiversity Action Plan (BAP) species, we have a Google map showing the location of all records on aerial maps.

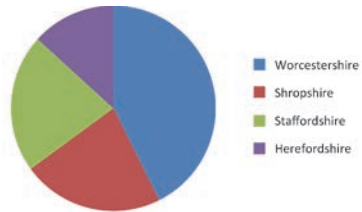
From the UKBMS transects, we are able to generate 5-year population trends. The results from 2020 are difficult to analyse: while 60 transects were walked, some of the early weeks were missed due to lockdown. Nevertheless, we have generated trends for all species.

All of our recording results and analysis are published on our website. The example shows the data you'll find there for the **Purple Hairstreak**, subject of the preceding article.

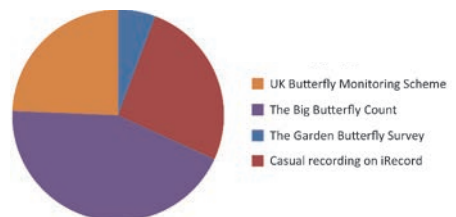
## Article and charts by John Tilt

[westmidlandsbutterflyconservation.wordpress.com](http://westmidlandsbutterflyconservation.wordpress.com)

### County distribution



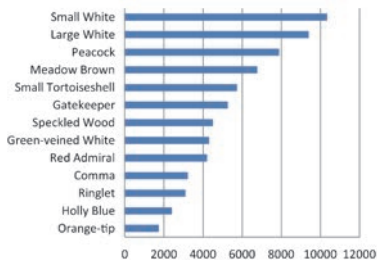
### Survey types



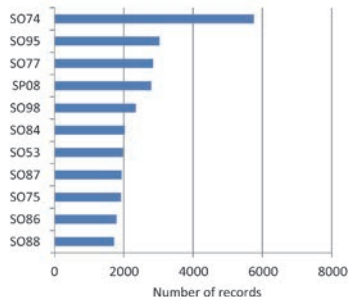


# records in 2020

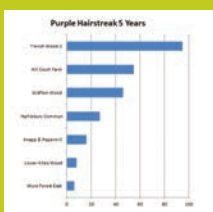
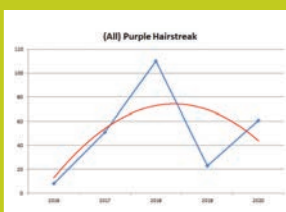
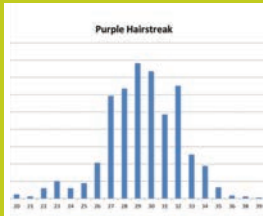
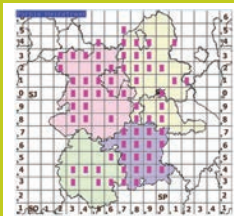
## Most recorded species



## Records in 10km squares



## Data from the website for the Purple Hairstreak



## Herefordshire newsletter



The Branch decided some time ago that it would like to see county groups established. So far, Herefordshire is the only one to have come into existence. Early in 2016, we produced our first newsletter and we've

continued to produce two a year since.

It was always our intention that all members in Herefordshire would automatically receive a full-colour PDF version by email. (I post black-and-white photocopies to Herefordshire members who do not use email but obviously this incurs costs.) However, we've had some problems as a result of the Data Protection Act and the pandemic so, until those are resolved, I wanted to tell you how you can obtain the newsletter:

- You can view all issues on the Branch website (see page 5).
- If you're on my mailing list, please respond when we ask for confirmation that you want to remain on it.
- If you'd like to be added to my mailing list, whether you live in Herefordshire or not, please email me with your details.
- If you don't have an email address and live in Herefordshire, please call or write with your details.

We want as many people as possible to see our newsletter, which includes items of regional as well as county interest.

**Martyn G Davies**

[martyn.davies808@gmail.com](mailto:martyn.davies808@gmail.com)

01432 266703

11 Rowland Close, HEREFORD, HR1 1XF

# The miraculous

The metamorphosis of the caterpillar into a chrysalis and then to an adult butterfly is one of the great 'miracles' of nature.

From early times, this transformation has been likened to the resurrection of the soul, and hence the Greek word for a butterfly 'psyche' is the same as for the soul. But how do butterflies perform this feat and why do they do it?

Having four specialized stages of development, gives butterflies and moths a big advantage. The egg

The colour of the male Orange-tip butterfly and other features can be seen through the transparent pupal case just before emergence. (Peter Eeles)

The White Admiral chrysalis mimics a dead leaf, complete with humps and bumps. (Peter Eeles)

Several Nymphalid pupae, such as this Red Admiral, are studded with gold spots, probably to disrupt their outline to predators. (Peter Eeles)

The Wood White forms its chrysalis deep in tangled undergrowth. This extraordinary photo shows one that was spotted just after emergence. (Dave Miller)

# transformation

can be hidden away, while the caterpillar can specialise solely on eating and the adult stage can focus on mating, dispersing and egg-laying. The chrysalis or pupal stage is the dormant phase needed to connect the last two.

## *The wandering caterpillar*

When a caterpillar is full-grown and ready to pupate, it goes through a 'wandering' phase to avoid predators that might hone in on its feeding damage. Few people have found wild pupae to know how far they go, but I painstakingly followed Wood White caterpillars and found that they travel between one and four metres from their food-plant. Some go much further. Christer Wiklund in Sweden found that Swallowtail caterpillars walk for two to six hours before settling on a place to pupate. They can travel up to 400m in that time, though few ever probably do that in the wild.

Having chosen the right spot, the caterpillar spins a small silken pad on which to fasten their claspers. Some spin a silken girdle around their waist to fix them in place, while others hang freely. Some like the Grayling and Ringlet pupate on the ground. Once they are securely fixed, they shed their caterpillar skin for the last time by wriggling it down to the base where it falls off, leaving the new pupal case to harden as a chrysalis.

## *Masters of disguise*

The final chrysalis is a master of disguise. Most are extremely well camouflaged, green or brown to blend in with their background. The Swallowtail and Wood White have two colour forms to blend in according to the colour of their chosen substrate (either green or brown). Others have remarkable protuberances that make them look like a dead leaf, while some like the Small Tortoiseshell and Red Admiral have gold spots that disrupt their shape. These spots are why early butterfly collectors gave themselves the romantic name of Aurelians, literally meaning 'the golden ones'.

## *Active on the inside*

Although the chrysalis seems still and tranquil on the outside, it is highly active on the inside. The old

## Look out for...

This account is taken from Martin's new book *Butterflies: a natural history*, reviewed on page 28 and published by Bloomsbury. [www.bloomsbury.com/uk/butterflies-9781472975256](http://www.bloomsbury.com/uk/butterflies-9781472975256)



caterpillar organs are broken down and reformed into the body of an adult butterfly. Most of the organs of the adult butterfly are already present within the caterpillar as dormant, unspecialised cells. At the chrysalis stage, these cells are stimulated by hormones produced in the brain and develop into the adult organs. Small buds become the proboscis, while others become antennae and other vital structures. As the chrysalis nears hatching, the newly formed proboscis, eyes and wings can be seen through the increasingly transparent case and even some of the adult colour shows through.

## *The final transformation*

After weeks, sometime months, of apparent dormancy, the final transformation into an adult butterfly begins. The butterfly breaks free by splitting the case of the chrysalis along a line of weakness that runs from the head down either side of the wing margin. It takes in air through the tiny spiracles that run down the sides of the chrysalis and uses this to push a layer of gas between the butterfly and the external case. Finally it pushes air into its abdomen to force the case to split like a zipper.

The butterfly then clammers out onto the empty husk of the case, clinging on while fluid is pumped into its initially soft and pulpy wings. After several hours, the wings have hardened and the butterfly is ready to take its first flight. The process of metamorphosis is at last complete. Soon the butterfly will mate and its remarkable life-cycle will begin again.

Article by Martin Warren

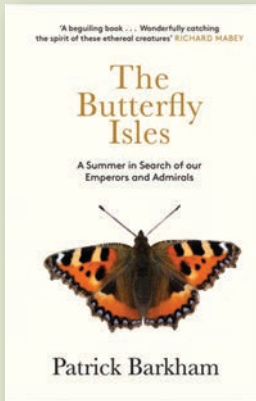


## Challenge: Spot all 40 species of the West Midlands

For its 40th anniversary in 2019, the Branch challenged members to find all 39 butterfly species that then occurred in the West Midlands (now 40, with the recent re-colonisation of **Small Blue**). This was a regional variant of **Patrick Barkham's** epic 2009 search for all 59 species of British butterflies, and Nicola Heeley described how she and her daughter got on in Comma104.

With the prospect of Covid-19 restrictions easing, why not try it yourself? Patrick Barkham launched his search at a difficult point in his life – perhaps now is just the time for some of you. Two of our publications should help you on your journey: *Butterflies of the West Midlands* and *Walking with Butterflies*.

Below is a review of the book describing Barkham's search. Many Branch members have enjoyed it



## The Butterfly Isles

- ISBN: 9781783784585 • Author: Patrick Barkham
- Publisher: Granta Books • Cost: £9.99 • Publication date: May 2018 (revised edition) • Format: Paperback, 304 pages

A journey is all about the flight path along which you fly to your destination. Back in 2009, Patrick decided to find all the British butterflies in a single year! That's a significant end-point to get to. His journey takes him to many places with many successes, and a few failures, in his search.

### Important and practical content

Butterflies do not always show when you want them to and are dependent on many factors in the environment such as the weather, emergence date and survival in the specific habitats. Not only does this book say when and where he sees the species, but something of their habitats and conservation. On his journey he meets up with various very informed and knowledgeable butterfly conservationists and observers. These people raise the stories to a higher level of importance for certain species.

The UK doesn't have a large number of species compared to continental Europe, but the different habitats for the specialist species are significantly far apart. The **Heath Fritillary** is many miles from the **Mountain Ringlet**. It is no mean feat to see them

both in any year, never mind among all the other species to see.

### Approachable and engaging style

The chapters are nice reads and approachable for both a general reader and the enthusiastic lepidopterist. You'll be carried along with some of the troubles and brilliant finds in his journey. Will he succeed in his quest of seeing all 59 species? This can only be answered by reading the book.

It is a very well received book and a great read in the moments when we can't be outside seeing butterflies. Taking you to nature reserves and beautiful places in your imagination, it can inspire you for the season ahead.

### Review by Neil Gregory



Mountain Ringlet (David Morris)

# Branch contacts

## Officers

Chairman	Mike Southall*	michael_southall58@hotmail.co.uk	01299 251467
Vice Chair	Mel Mason*	meljmason@btinternet.com	01684 565700
Treasurer	Peter Seal*	peterseal3@btinternet.com	01905 426398
Secretary	Martin Harrison*	martinh1236@yahoo.com	01743 351929
Recording, Transects, Website	John Tilt*	john.tilt2@btopenworld.com	01386 792458
Publicity, Marketing	Mike Williams*	wmbutterflies@gmail.com	01299 824860
Regional Conservation Manager (BC)	Rhona Goddard	rgoddard@butterfly-conservation.org	01746 762364
Reserves Officer (BC)	Lucy Morton	lmorton@butterfly-conservation.org	07503 220191
Conservation – Herefordshire	Ian Hart*	yellowrattle4@aol.com	01981 510259
Conservation – Worcestershire	Trevor Bucknall*	trevor.bucknall@outlook.com	01905 755757
Moths – Birmingham, Black Country	David Jackson*	jacksongrus@talktalk.net	01902 344716
Moths – Herefordshire	Robin Hemming*	robinhemming@btinternet.com	01568 797351
Moths – Worcestershire	Mike Southall*	michael_southall58@hotmail.co.uk	01299 251467
Malvern Hills	Mel Mason*	meljmason@btinternet.com	01684 565700
Brown Hairstreak Champion	Simon Primrose*	simonjprimrose@aol.com	07952 260153
Herefordshire Newsletter Editor	Martyn Davies*	martyn.davies808@gmail.com	01432 266703
Twitter manager	Richard Clifford	info@ricplumbingandheating.co.uk	
Wider Countryside Butterfly Count	Philip Nunn	philip-nunn@hotmail.co.uk	07931 488624

## Reserve Managers

Ewyas Harold	Ian Hart*	yellowrattle4@aol.com	01981 510259
Grafton Wood	John Tilt*	john.tilt2@btopenworld.com	01386 792458
Monkwood	Phil Adams	pdadamsrainbow@gmail.com	07725 622342
Prees Heath	Stephen Lewis*	phwarden@sky.com	07900 886809
Trench Wood	Matthew Bridger	bridge1805@btinternet.com	07801 568334

## County Records Coordinators – butterflies

Birmingham, Black Country	Richard Southwell	richard_southwell@hotmail.co.uk	01384 397066
Herefordshire	Bob Hall	randphall@gmail.com	01432 850623
	Ian Draycott	idraycott@yahoo.co.uk	01600 891123
Shropshire	Jason Kernohan	jasonkernohan@blueyonder.co.uk	07856 276512
	Peta Sams	peta.sams@gmail.com	
Staffordshire	John Bryan	johnpbryan15@aol.com	
Worcestershire	Mike Williams*	wmbutterflies@gmail.com	01299 824860
	Mel Mason*	meljmason@btinternet.com	01684 565700

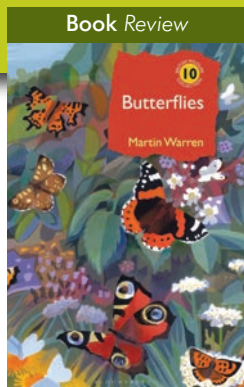
## County Moth Recorders

Herefordshire	Peter Hall*	peter.herefordcmr@gmail.com	01886 822135
Shropshire – macro	Tony Jacques	rec-vc40@vc40ij.plus.com	
Shropshire – micro	Mike Shurmer	mpshurmer@gmail.com	
	Graham Wenman	gjwenman@yahoo.co.uk	07565 802480
Staffordshire	David Emley	recorder@staffsmoths.org.uk	07484 185039
Worcestershire	Tony Simpson	Tonysimpson.1945@hotmail.co.uk	

## Other committee members

Jenny Joy*	jenny.joy17@outlook.com	01952 249325
Joy Stevens*	joystevens@blueyonder.co.uk	01384 372397
Sarah Wager*	s.wager01@btinternet.com	
Steven Williams*	s.williams@yescomputers.co.uk	07974 152081

# Butterflies: A Natural History



- **ISBN:** 9781472975225 • **Author:** Martin Warren • **Cost:** £31.50
- **Publisher:** Bloomsbury Wildlife • **Publication date:** April 2021
- **Format:** Paperback or ebook, 384 pages, 300 colour photos and illustrations

This is one of the most anticipated books of the summer for butterfly enthusiasts.

Martin Warren was CEO of Butterfly Conservation

until recently and this book reminds us of the many advances in butterfly knowledge made during his stewardship. It's a well written and comprehensive treatise on the world of butterflies.

## Structure

The structure of the book follows a butterfly's life history: the adult's needs, mobility, mate location and larval food-plant selection for egg-laying; the caterpillar's life and transformation into a pupa; and the new adult's emergence. Each stage has a chapter, with plenty of interesting detail not widely published before. I was particularly struck by tabulated answers to the questions of how long butterflies live and why some remain coupled long after the physical act of passing on sperm is complete.

Perhaps not everyone's cup of tea is the chapter entitled 'The Macabre World of Parasitoids'. It details the relationships between butterflies and their parasites, which are not always detrimental to the butterfly's long-term welfare. Later chapters cover migration (there can't be many butterfly books that feature a photo of camels!) and the importance of recording.

The final section covers conservation and brings home the important work done by Butterfly Conservation. I particularly liked the general principles of managing habitats for butterflies; they should be read by every local authority, land manager and farmer. The closing chapters look at future prospects for butterflies in a changing world, especially the impact of climate change.

In his introduction, Martin states that his aim was to write a book that he would have loved to read as a young naturalist but also to say something to more experienced butterfly watchers. That's a difficult balance but one he's achieved with aplomb.

Review by **Mike Williams**

## Scope

The book's title doesn't really do justice to its content. Prospective readers can rest assured that this is not a dry, academic tome; it's largely free of technical jargon and very readable. Its 18 chapters cover a lot of ground and, while some information will be familiar to those with an existing interest in butterflies, I can't imagine that anyone won't find something new. As well as extensive personal experience of butterflies, Martin includes many examples of the latest research that provide fascinating insights into new discoveries and highlight how much we have yet to learn.

## Author

Martin starts with an account of his early interest in butterflies, to which many of us will relate: from breeding caterpillars as a small boy, searching the lanes around his home for butterflies, being inspired by Rachel Carson's *The Silent Spring* and eventually electing to study conservation at university (instead of medicine).

This was followed by a PhD on the **Wood White** based at the Monk Wood Experimental Station, then part of the Nature Conservancy Council (now Natural England). That led to work on other species, such as the **Heath Fritillary** in Kent (then teetering on the verge of extinction).

In 1993, Martin applied to Butterfly Conservation for

We carry a book review in each issue of *The Comma*. Newly published titles are ideal but particularly interesting or useful books from the past are also worth highlighting. See page 2 for contribution details.